

A CMS Energy Company

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January 20, 1999

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT
LICENSEE EVENT REPORT 98-013, SAFEGUARDS TRANSFORMER TAP
CHANGER FAILURE CAUSES INADVERTENT DIESEL GENERATOR START

Licensee Event Report (LER) 98-013 is attached. The LER describes an event where a malfunction of the Safeguards Transformer automatic tap changer resulted in an undervoltage condition on 2400 volt Buses 1C and 1D which actuated both emergency diesel generators.

This event is reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(iv) as a condition that resulted in an automatic actuation of an engineered safety feature.

SUMMARY OF COMMITMENTS

This letter contains no new commitments and no revisions to existing commitments.


Thomas J. Palmisano
Site Vice President

CC Administrator, Region III, USNRC
Project Manager, NRR, USNRC
NRC Resident Inspector - Palisades

Attachment

270037
9901270015 990120
PDR ADOCK 03000255
S PDR

1/1
IE22

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 60 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid DMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)

CONSUMERS ENERGY COMPANY - PALISADES NUCLEAR PLANT

DOCKET NUMBER (2)

05000255

PAGE (3)

1 OF 2

TITLE (4)

SAFEGUARDS TRANSFORMER TAP CHANGER FAILURE CAUSES INADVERTENT DIESEL GENERATOR START

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	22	98	98	-- 013	-- 00	01	20	99	FACILITY NAME	DOCKET NUMBER
										05000
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		000	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
			20.2203(a)(2)(ii)		20.2203(a)(4)		X 50.73(a)(2)(iv)		OTHER	
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A	
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

Barbara E. Dotson

TELEPHONE NUMBER (Include Area Code)

(616) 764-2265

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	EB	CNTR	M175	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On December 22, 1998 at approximately 1140 hours, during heatup from a forced outage, a malfunction of the Safeguards Transformer automatic tap changer resulted in an undervoltage condition on 2400 volt Buses 1C and 1D. This undervoltage resulted in the actuation of the second level undervoltage relaying protection which caused both emergency diesel generators to start. This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv) as a condition that resulted in an automatic actuation of an engineered safety feature.

All equipment responded as expected to the event. Proper sequencing of loads onto each emergency diesel generator was verified. Subsequently, both 2400 volt buses were removed from their emergency diesel generator supply and were transferred to Startup Transformer 1-2. The cause of the event was the failure of a motor contactor in the tap changer. The contactor was replaced, testing was completed satisfactorily and the Safeguards Transformer was returned to service.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET(2)	LER NUMBER (6)			PAGE
CONSUMERS ENERGY COMPANY PALISADES NUCLEAR PLANT	05000255	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 2
		98	013	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

EVENT DESCRIPTION

On December 22, 1998 at approximately 1140 hours, during heatup from a forced outage, a malfunction of the Safeguards Transformer automatic tap changer resulted in an undervoltage condition on 2400 volt Buses 1C and 1D. This undervoltage resulted in the actuation of the second level undervoltage relaying protection which caused both emergency diesel generators to start and buses 1C and 1D to transfer to the emergency diesel generators.

All equipment responded as expected to the event. Proper sequencing of loads onto each emergency diesel generator was verified. Subsequently, both 2400 volt buses were removed from their emergency diesel generator supply and were transferred to Startup Transformer 1-2. A four hour non-emergency report was made to the NRC per 10CFR50.72.

ANALYSIS OF THE EVENT

The tap changer was found at its maximum lower position with a raise signal present. No alarms were noted locally and all annunciator lights were functional. A review of bus voltage data on the plant computer revealed that the tap changer had been "hunting" excessively for several shifts prior to the failure. The switchyard event recorder and the plant process computer data indicated no 345 kv system disturbance which could have contributed to the problem.

Subsequent troubleshooting identified that the tap changer motor contactor failed to open properly, causing the tap changer to drive continuously to a minimum voltage position and lock-out mechanically. This contactor and the contactor which causes the tap changer to raise, were replaced.

SAFETY SIGNIFICANCE

There was no safety significance associated with this event. All equipment responded as expected.

CAUSE OF THE EVENT

The contactor which causes the tap changer motor to move to lower positions failed.

CORRECTIVE ACTIONS COMPLETED

Both lower and raise motor contactors were replaced. Post-maintenance testing was completed and the Safeguards Transformer was returned to service. In addition, Operations has initiated action to monitor Safeguards Transformer tap changer performance more closely.

CORRECTIVE ACTIONS REMAINING TO BE COMPLETED

None.

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9901270015 DOC. DATE: 99/01/20 NOTARIZED: NO DOCKET #
 FACIL: 50-255 Palisades Nuclear Plant, Consumers Power Co. 05000255
 AUTH. NAME AUTHOR AFFILIATION
 DOTSON, B.E. Consumers Energy Co. (formerly Consumers Power Co.),
 PALMISANO, T.J. Consumers Energy Co. (formerly Consumers Power Co.),
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-013-00: on 981222, safeguards transfer tap changer failure caused inadvertent DG start. Caused by failed motor contactor. Contactor was replaced. With 990120 ltr.

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